

## **Regional HIV/AIDS Epidemiologic Profile of Northeast HSR, Massachusetts: 2012**

### **Recent changes to the presentation of Massachusetts HIV/AIDS surveillance data**

Effective January 1, 2011, the Massachusetts Department of Public Health (MDPH), Bureau of Infectious Diseases, HIV/AIDS fact sheets, epidemiologic reports and other HIV data presentations have been updated to remove all HIV/AIDS cases who were first diagnosed in another state before being reported in Massachusetts. As of January 1, 2012, this resulted in the removal of 2,924 HIV/AIDS cases, of which 808 have died and 2,116 were living. These persons living with HIV/AIDS may still continue to reside and receive care in the Commonwealth. The total number of persons living with HIV/AIDS, irrespective of location of diagnosis, is the basis for MDPH service planning. This change is partially a result of increased activities required by the Centers for Disease Control and Prevention (CDC) for de-duplication among states in an effort to identify cases that are counted multiple times in the National HIV/AIDS Surveillance System. The cases are assigned to the state that reports the earliest date of AIDS diagnosis if available. If the case has not progressed to AIDS, the case is assigned to the state with the earliest HIV diagnosis date. Please note that all previous HIV/AIDS fact sheets, data reports and presentations include cases that may have been first diagnosed in another state.

Also effective January 1, 2011, the MDPH HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to eliminate the presumed heterosexual exposure mode category for males; those cases have been reassigned to the no identified risk (NIR) exposure mode category. The presumed heterosexual exposure mode category was used with the intention of identifying HIV exposure mode for females when sex with males is the only reported risk factor, there is no evidence of current or past injection drug use (IDU), and behavioral risk and HIV status information about male sexual partners are unknown. Twenty-nine percent of females living with HIV/AIDS and 40% of recent female HIV diagnoses are reported in the presumed heterosexual exposure mode category. The application of the presumed heterosexual exposure mode category to males is overly inclusive in that female to male HIV transmission is biologically less probable, and there are alternate exposure modes that are possible for males, including sex with other men (MSM) or IDU. The CDC reports males diagnosed with HIV/AIDS who report sex with females as their only risk factor, without corresponding partner risk or HIV status information, in the NIR exposure mode category. This revision to report presumed heterosexual male HIV/AIDS cases as NIR will bring Massachusetts HIV/AIDS case reporting for males in alignment with CDC standards. The MDPH will maintain presumed heterosexual and heterosexual exposure mode categories for females.

**Table 1. Total number of people reported with HIV infection or AIDS<sup>1</sup> by mortality status on December 31, 2011: Northeast HSR, Massachusetts<sup>2</sup>**

	<b>N</b>	<b>%</b>
People Living with HIV/AIDS	2,827	62%
People Reported with HIV or AIDS who are Deceased	1,699	38%
<b>Total Number of People Reported with HIV Infection or AIDS</b>	<b>4,526</b>	<b>100%</b>

<sup>1</sup> Does not include individuals diagnosed with HIV infection (non-AIDS) who died prior to January 1, 1999 or who were not in care on January 1, 1999

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

**Table 2. Average annual rate of HIV infection diagnosis from 2008 to 2010 and HIV/AIDS prevalence rate on 12/31/11<sup>1</sup>: Northeast HSR, Massachusetts<sup>2</sup>**

<b>Average annual HIV diagnosis rate from 2008–2010</b>	<b>Average rate per 100,000</b>	<b>Average annual number of HIV diagnoses</b>
Northeast HSR, MA	9.1	116.7
Massachusetts Total	10.3	664.7
<b>HIV/AIDS prevalence rate on 12/31/11</b>	<b>Rate per 100,000</b>	<b>Number of people living with HIV/AIDS</b>
Northeast HSR, MA	219.4	2,827
Massachusetts Total	277.5	18,170

<sup>1</sup> The denominators for rate calculations are from the MDPH Massachusetts Race Allocated Census 2010 Estimates (MRACE 2010), Massachusetts Department of Public Health, Bureau of Health Information, Statistics, Research, and Evaluation.

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

**Table 3. People living with HIV/AIDS<sup>1</sup>, deaths among people reported with HIV/AIDS, and newly diagnosed HIV infections by year<sup>2</sup>: 2001–2010, Northeast HSR, Massachusetts<sup>3</sup>**

<b>Year</b>	<b>HIV/AIDS Prevalence</b>	<b>Deaths among those with HIV/AIDS</b>	<b>Diagnosis of HIV Infection</b>
2001	1,905	66	166
2002	2,024	49	166
2003	2,133	51	160
2004	2,246	44	157
2005	2,349	42	143
2006	2,444	43	137
2007	2,504	53	113
2008	2,600	34	130
2009	2,673	33	106
2010	2,741	46	114

<sup>1</sup> Number of people living with HIV/AIDS on 12/31 of each year

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

Data source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

**Table 4. People diagnosed with HIV infection from 2008–2010<sup>1</sup> and people living with HIV/AIDS on December 31, 2011 by gender, place of birth, race/ethnicity, exposure mode, age at HIV infection diagnosis and current age: Northeast HSR, Massachusetts<sup>2</sup>**

HIV Infection Diagnoses			PLWH/A	
Gender:	N	%	N	%
Male	241	69%	1,875	66%
Female	109	31%	952	34%
Place of Birth:	N	%	N	%
US	176	50%	1,586	56%
Puerto Rico/US Dependency <sup>3</sup>	31	9%	397	14%
Non-US	143	41%	844	30%
Race/Ethnicity:	N	%	N	%
White (non-Hispanic)	112	32%	1,221	43%
Black (non-Hispanic)	103	29%	662	23%
Hispanic/Latino	111	32%	843	30%
Asian/Pacific Islander	23	7%	90	3%
Exposure Mode:	N	%	N	%
Male-to-male sex (MSM)	118	34%	869	31%
Injection Drug Use (IDU)	21	6%	519	18%
MSM/IDU	-- <sup>6</sup>	-- <sup>6</sup>	81	3%
Heterosexual Sex	46	13%	440	16%
Other	-- <sup>6</sup>	-- <sup>6</sup>	71	3%
Total Undetermined	154	44%	847	30%
• Presumed Heterosexual Sex <sup>4</sup>	44	13%	306	11%
• Undetermined <sup>5</sup>	110	31%	541	19%
Age:	N	%	N	%
	At Diagnosis		On December 31, 2011	
Under 13	1	<1%	7	<1%
13 to 19	6	2%	22	1%
20 to 24	28	8%	52	2%
25 to 29	34	10%	70	2%
30 to 34	51	15%	141	5%
35 to 39	56	16%	234	8%
40 to 44	57	16%	431	15%
45 to 49	53	15%	597	21%
50 to 54	37	11%	556	20%
55 to 59	12	3%	369	13%
60+	15	4%	348	12%
<b>Total<sup>7</sup></b>	<b>350</b>	<b>100%</b>	<b>2,827</b>	<b>100%</b>

<sup>1</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>2</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>3</sup> Ninety-eight percent of people diagnosed with HIV infection from 2008–2010 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>4</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>5</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>6</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

<sup>7</sup> Total includes American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 5. People living with HIV/AIDS on December 31, 2011 by gender and race/ethnicity: Northeast HSR, Massachusetts<sup>1</sup>**

Race/Ethnicity:	Male		Female	
	N	%	N	%
White (non-Hispanic)	974	52%	247	26%
Black (non-Hispanic)	310	17%	352	37%
Hispanic/Latino	523	28%	320	34%
Asian/Pacific Islander	61	3%	29	3%
<b>Total<sup>2</sup></b>	<b>1,875</b>	<b>100%</b>	<b>952</b>	<b>100%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Total includes American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 6. People living with HIV/AIDS on December 31, 2011 by gender and exposure mode: Northeast HSR, Massachusetts<sup>1</sup>**

Exposure Mode:	Male		Female	
	N	%	N	%
Male-to-male sex (MSM)	869	46%	N/A	N/A
Injection drug use (IDU)	331	18%	188	20%
MSM/IDU	81	4%	N/A	N/A
Heterosexual sex	118	6%	322	34%
Other	34	2%	37	4%
Total Undetermined	442	24%	405	43%
• Presumed heterosexual sex <sup>2</sup>	N/A	N/A	306	32%
• Undetermined <sup>3</sup>	442	24%	99	10%
<b>Total</b>	<b>1,875</b>	<b>100%</b>	<b>952</b>	<b>100%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>3</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

N/A=Not Applicable

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 7. People diagnosed with HIV infection by gender and year of diagnosis: Northeast HSR, Massachusetts<sup>1</sup>, 2001–2010<sup>2</sup>**

	Male		Female		Total
	N	%	N	%	
2001	103	62%	63	38%	166
2002	107	64%	59	36%	166
2003	108	68%	52	33%	160
2004	94	60%	63	40%	157
2005	89	62%	54	38%	143
2006	95	69%	42	31%	137
2007	66	58%	47	42%	113
2008	88	68%	42	32%	130
2009	73	69%	33	31%	106
2010	80	70%	34	30%	114

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 8. People diagnosed with HIV infection by race/ethnicity and year of diagnosis: Northeast HSR, Massachusetts<sup>1</sup>, 2001–2010<sup>2</sup>**

	White Non-Hispanic		Black Non-Hispanic		Hispanic/Latino		Total <sup>3</sup>
	N	%	N	%	N	%	N
2001	63	38%	53	32%	42	25%	166
2002	63	38%	52	31%	41	25%	166
2003	58	36%	46	29%	50	31%	160
2004	57	36%	49	31%	44	28%	157
2005	46	32%	48	34%	45	31%	143
2006	59	43%	39	28%	36	26%	137
2007	39	35%	30	27%	40	35%	113
2008	40	31%	40	31%	37	28%	130
2009	32	30%	32	30%	37	35%	106
2010	40	35%	31	27%	37	32%	114

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Totals include Asian/Pacific Islander, American Indian/Alaskan Native individuals, and those of other or undetermined race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 9. People diagnosed with HIV infection by place of birth and year of diagnosis: Northeast HSR, Massachusetts<sup>1</sup>, 2001–2010<sup>2</sup>**

	US		Puerto Rico/ US Dependency <sup>3</sup>		Non-US		Total
	N	%	N	%	N	%	N
2001	76	46%	24	14%	66	40%	<b>166</b>
2002	79	48%	19	11%	68	41%	<b>166</b>
2003	74	46%	23	14%	63	39%	<b>160</b>
2004	78	50%	13	8%	66	42%	<b>157</b>
2005	62	43%	14	10%	67	47%	<b>143</b>
2006	83	61%	9	7%	45	33%	<b>137</b>
2007	58	51%	12	11%	43	38%	<b>113</b>
2008	64	49%	10	8%	56	43%	<b>130</b>
2009	53	50%	9	8%	44	42%	<b>106</b>
2010	59	52%	12	11%	43	38%	<b>114</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-eight percent of all people diagnosed with HIV infection in MA who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, <1% were born in American Samoa, <1% were born in Guam and 1% were born in an unknown dependency.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12

**Table 10. People diagnosed with HIV infection by exposure mode and year of diagnosis: Northeast HSR, Massachusetts<sup>1</sup>, 2001–2010<sup>2</sup>**

	MSM		IDU		MSM/ IDU		HTSX		Other		Pres. HTSX <sup>3</sup>		Undeter- mined <sup>4</sup>		Total
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N
2001	46	28%	19	11%	-- <sup>5</sup>	-- <sup>5</sup>	34	20%	-- <sup>5</sup>	-- <sup>5</sup>	23	14%	35	21%	<b>166</b>
2002	47	28%	24	14%	-- <sup>5</sup>	-- <sup>5</sup>	26	16%	-- <sup>5</sup>	-- <sup>5</sup>	27	16%	39	23%	<b>166</b>
2003	52	33%	30	19%	-- <sup>5</sup>	-- <sup>5</sup>	20	13%	-- <sup>5</sup>	-- <sup>5</sup>	16	10%	40	25%	<b>160</b>
2004	39	25%	19	12%	-- <sup>5</sup>	-- <sup>5</sup>	27	17%	-- <sup>5</sup>	-- <sup>5</sup>	23	15%	43	27%	<b>157</b>
2005	36	25%	14	10%	-- <sup>5</sup>	-- <sup>5</sup>	24	17%	-- <sup>5</sup>	-- <sup>5</sup>	27	19%	38	27%	<b>143</b>
2006	48	35%	14	10%	-- <sup>5</sup>	-- <sup>5</sup>	18	13%	-- <sup>5</sup>	-- <sup>5</sup>	19	14%	33	24%	<b>137</b>
2007	35	31%	16	14%	-- <sup>5</sup>	-- <sup>5</sup>	14	12%	-- <sup>5</sup>	-- <sup>5</sup>	17	15%	29	26%	<b>113</b>
2008	44	34%	6	5%	5	4%	16	12%	0	0%	18	14%	41	32%	<b>130</b>
2009	42	40%	6	6%	-- <sup>5</sup>	-- <sup>5</sup>	14	13%	-- <sup>5</sup>	-- <sup>5</sup>	12	11%	29	27%	<b>106</b>
2010	32	28%	9	8%	-- <sup>5</sup>	-- <sup>5</sup>	16	14%	-- <sup>5</sup>	-- <sup>5</sup>	14	12%	40	35%	<b>114</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Includes female sex with male of unknown HIV status or risk. This category is limited to females.

<sup>4</sup> Includes male sex with female of unknown HIV status or risk, those still being followed up for risk information, those who have died with no determined risk, and those lost to follow-up.

<sup>5</sup> Values less than five are suppressed for populations less than 50,000 or for populations of unknown size. Additional values may be suppressed to prevent back calculation.

MSM = Male-to-Male Sex; IDU = Injection Drug Use; MSM/IDU = Male-to-Male Sex and Injection Drug Use; HTSX = Heterosexual Sex; Pres. HTSX = Presumed Heterosexual Sex

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12



**Table 11. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by year of diagnosis: Northeast HSR, Massachusetts<sup>1</sup>, 2001–2010<sup>2</sup>**

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
Year:	N	N	%
2001	67	166	40%
2002	64	166	39%
2003	46	160	29%
2004	73	157	46%
2005	53	143	37%
2006	52	137	38%
2007	38	113	34%
2008	37	130	28%
2009	34	106	32%
2010	42	114	37%

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available ten-year period after the implementation of HIV infection reporting in 1999.  
Data Source: MDPH HIV/AIDS Surveillance Program, Data as of 1/1/12

**Table 12. People diagnosed with HIV infection and AIDS within two months and all people diagnosed with HIV infection by gender, race/ethnicity, and place of birth: Northeast HSR, Massachusetts,<sup>1</sup> 2008–2010<sup>2</sup>**

	HIV and AIDS diagnosed within two months	All HIV infection diagnoses	% diagnosed with HIV and AIDS within two months
<b>Gender:</b>	<b>N</b>	<b>N</b>	<b>%</b>
Male	84	241	35%
Female	29	109	27%
<b>Race/Ethnicity:</b>	<b>N</b>	<b>N</b>	<b>%</b>
White (non-Hispanic)	30	112	27%
Black (non-Hispanic)	32	103	31%
Hispanic/Latino	39	111	35%
Asian/Pacific Islander	11	23	48%
<b>Place of Birth:</b>	<b>N</b>	<b>N</b>	<b>%</b>
US	56	176	32%
Puerto Rico/US Dependencies <sup>3</sup>	15	31	48%
Non-US	42	143	29%
<b>Total<sup>4</sup></b>	<b>113</b>	<b>350</b>	<b>32%</b>

<sup>1</sup> Effective January 1, 2011, the Massachusetts Department of Public Health HIV/AIDS fact sheets, epidemiologic reports, and other data presentations have been updated to remove all HIV/AIDS cases that were first diagnosed in another state before being reported in Massachusetts.

<sup>2</sup> Reflects year of HIV infection diagnosis among all individuals reported with HIV infection, with or without an AIDS diagnosis for the most recently available three-year period after the implementation of HIV infection reporting in 1999.

<sup>3</sup> Ninety-eight percent of people diagnosed with HIV infection from 2008–2010 who were born in a US dependency were born in Puerto Rico, 1% were born in the US Virgin Islands, 1% were born in Guam and 1% were born in an unknown dependency.

<sup>4</sup> Totals include American Indian/Alaska Native, other and unspecified race/ethnicity.

Data Source: MDPH HIV/AIDS Surveillance Program (percentages may not add up to 100% due to rounding), Data as of 1/1/12